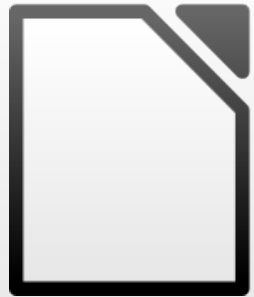


# LibreOffice and SUSE ...



# LibreOffice

The Document Foundation

**Michael Meeks**

**michael.meeks@novell.com**

*“Stand at the crossroads and look; ask for the ancient paths, ask where the good way is, and walk in it, and you will find rest for your souls...” -  
Jeremiah 6:16*



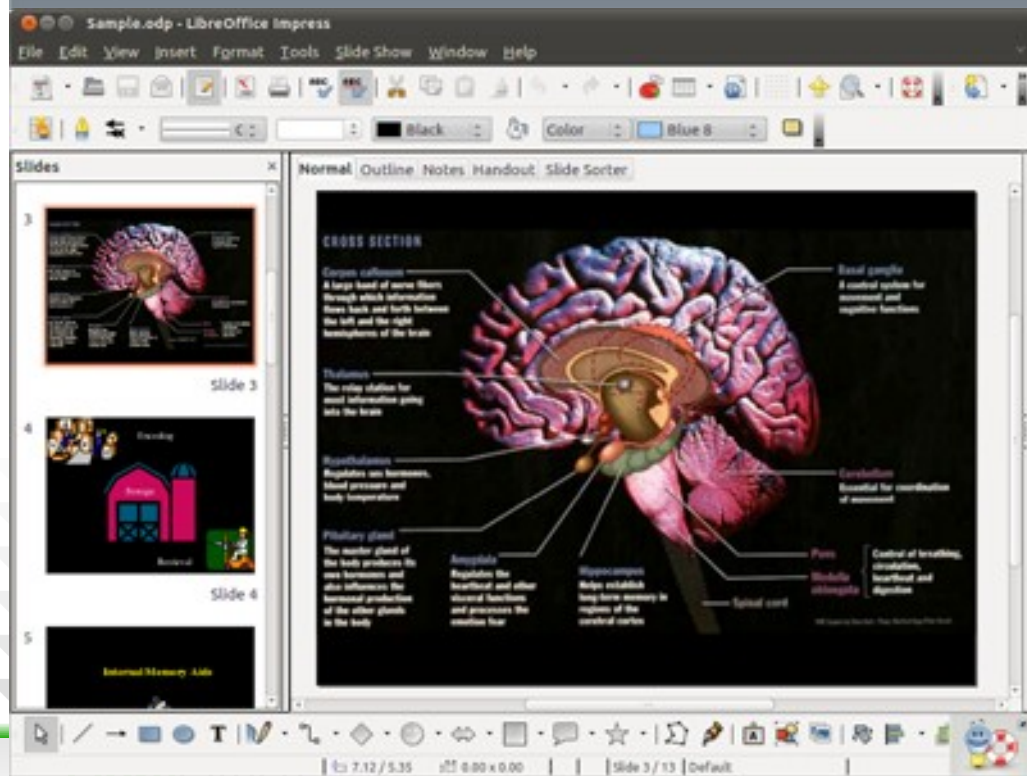
# Overview & disclaimer ...

- I am not speaking for the Document Foundation
  - These views are mine, but you're welcome to borrow them.
- LibreOffice is better, and fun too
  - What / why / distinctives of LibreOffice
  - Progress so far
- LibreOffice needs your help
  - and/or ways to get involved
- The future 3.5 and now ...
- Conclusions

# What / Why of LibreOffice

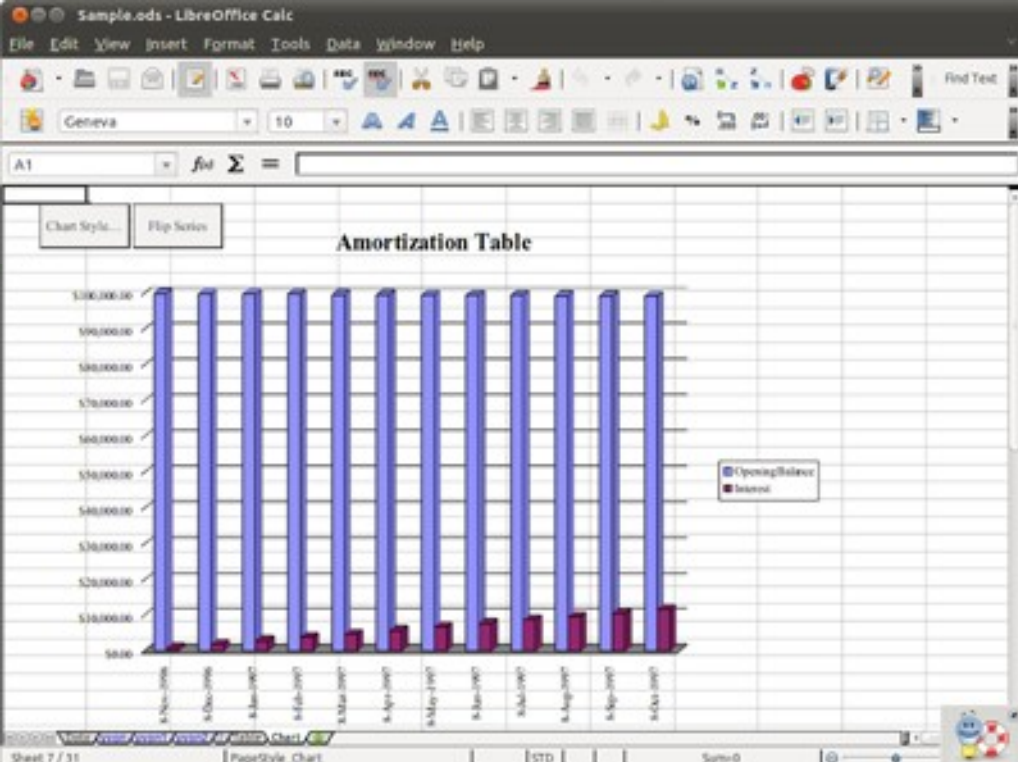


	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	WPC	Hero	Battle						Losses	Transports (based on logistics)						Total Resources	Food	Lumber	Stone	Iron
2		attack	Archery	6	7	8	9	10		0	2	4	6	8	10	215,000	100,000	20,000	20,000	20,000
3			HR	4	5	6	8	9												
4		1	40	50	12	12	10	10	0	43	36	31	27	24	22					
5			125																	
6		2	60	100	100	50	25	25	0	71	59	51	44	39	36	305,000	200,000	30,000	30,000	30,000
7		3	70	150	140	135	125	125	0	240	200	171	150	133	120	1,200,000	900,000	75,000	75,000	75,000
8			125			130	125	125												
9		4	70	300	275	225	200	200	0	452	377	323	283	251	224	2,260,000	1,600,000	120,000	120,000	120,000
10			125			250	225	200	0											
11		5	70	1,000	500	425	425	425	0	758	665	570	499	443	399	3,990,000	3,000,000	180,000	180,000	180,000
12			125			995	490	350												
13		6	100					3,000	275	1,040	867	743	650	576	520	5,200,000	4,000,000	200,000	200,000	200,000
14			7							900	750	643	563	500	450	4,500,000	3,000,000	500,000	500,000	500,000
15		8								2,280	1,900	1,629	1,425	1,267	1,140	11,400,000	8,000,000	800,000	800,000	800,000
16			9							3,370	2,808	2,407	2,106	1,872	1,685	18,850,000	14,000,000	550,000	550,000	550,000
17			10							4,460	3,717	3,186	2,788	2,478	2,230	22,300,000	18,000,000	600,000	600,000	600,000
18			HR																	
19																				
20																				
21																				
22																				
23																				
24																				
25																				
26																				
27																				
28																				
29																				



project progresses. While change is both certain and required, it is important to note that any changes to the Project Plan will impact at least one of three critical success factors: Available Time, Available Resources (Financial, Personnel), or Project Quality. The decision by which to make modifications to the Project Plan (including project scope and resources) should be coordinated using the following process:

- Step 1:** As soon as a change which impacts project scope, schedule, staffing or spending is identified, the Project Manager will document the issue.
- Step 2:** The Project Manager will review the change and determine the associated impact to the project and will forward the issue, along with a recommendation, to the Steering Committee for review and decision.
- Step 3:** Upon receipt, the Steering Committee should reach a consensus opinion on whether to approve, reject or modify the request based upon the information contained within the project website, the Project Manager's recommendation and their own judgment. Should the Steering Committee be unable to reach consensus on the approval or denial of a change, the issue will be forwarded to the Project Sponsor, with a written summation of the issue, for ultimate resolution.
- Step 4:** If required under the decision matrix or due to a lack of consensus, the Project Sponsor shall review the issue(s) and render a final decision on the approval or denial of a change.
- Step 5:** Following an approval or denial (by the Steering Committee or



Sample.odt - LibreOffice Math

File Edit View Format Tools Window Help

Elements

$\frac{a}{b}$   $\frac{a+b}{c}$   $f(x)$   $\Sigma a$

$a^b$   $e^x$   $(t)$

$+s$   $-s$   $sA$   $Fs$   $\sim s$

$a+b$   $a-b$   $a \cdot b$   $a/b$   $a \setminus b$

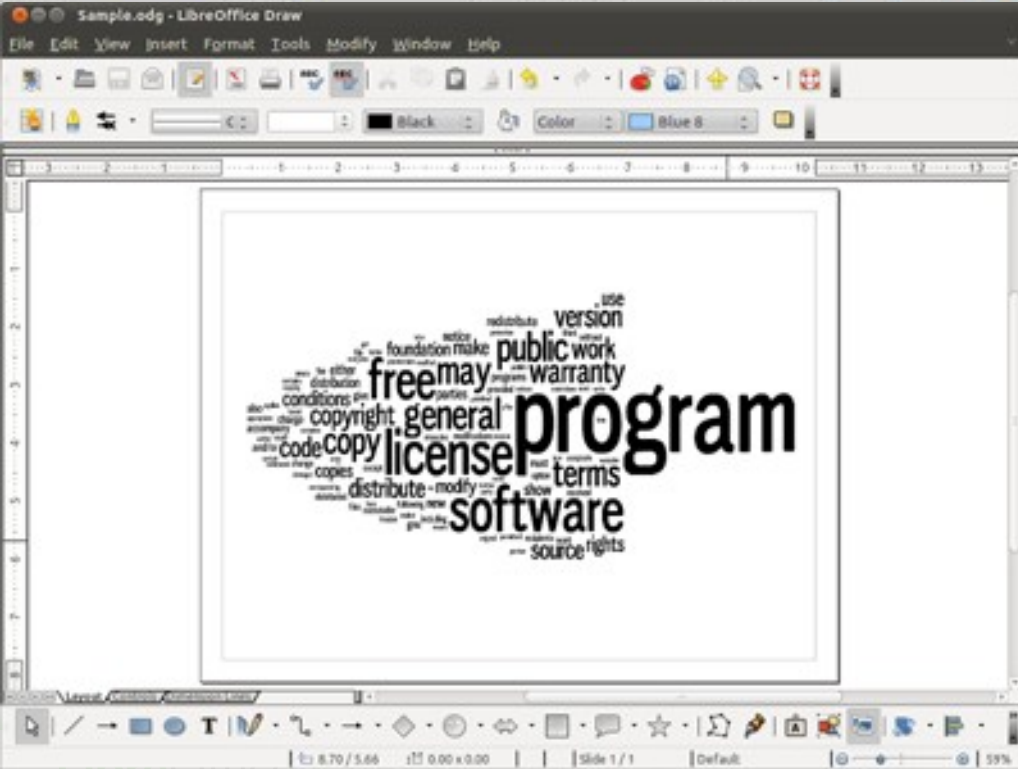
$a-b$   $\frac{a}{b}$   $a \cdot b$   $a/b$   $a \setminus b$

$a \cdot b$

$$\frac{a}{b} = \frac{b}{a+b}$$

$(a \text{ over } b) = (b \text{ over } (a + b))$

100%



Sample.odt - LibreOffice Impress

File Edit View Insert Format Tools Slide Show Window Help

4 Slides

Normal Outline Notes Handout Slide Sorter

1

Q Fever

2

Overview

3

Organism

4

The Org...

5

History

6

Slide 6

7

Transmis...

8

Slide 8

9

Slide 9

10

Epidemi...

11

Slide 11

12

Slide 12

13

Q Fever L...

14

Disease L...

15

Human ...

16

Acute In...

17

18

19

20

Tasks View x

- Master Pages
- Layouts
- Table Design
- Custom Animation

Modify effect:

Effect

Start

Property

Speed

First select the slide element and then click "Add..." to add an animation effect.

Change order:

Slide Transition

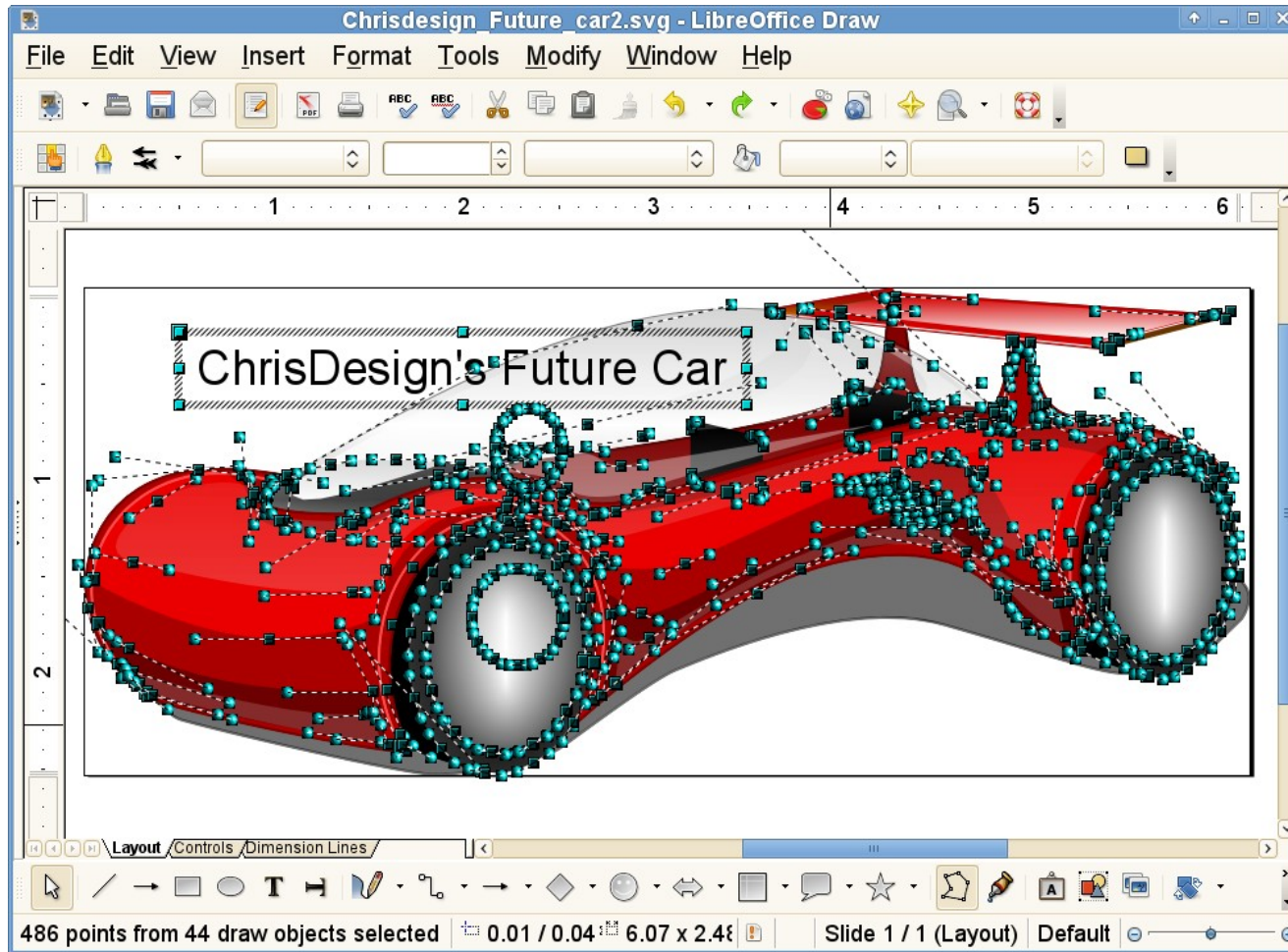
Slide 1 / 1 Default 59%

# What is LibreOffice / The Document Foundation

- Finally “doing it right”
  - a real Free Software / hackers project
    - FreeDesktop, LGPLv3+/MPL for new code
    - we warmly welcome new contributors
- Aim to create
  - a beautiful, Office suite we can be proud of, not ashamed of ...
- Ships now on Windows, Mac, GNU / Linux, \*BSD etc.
  - with some incremental features ...

# Features, distinctive to LibreOffice ...

Or: why should I choose LibreOffice ?



# Features, distinctive to LibreOffice ... #2

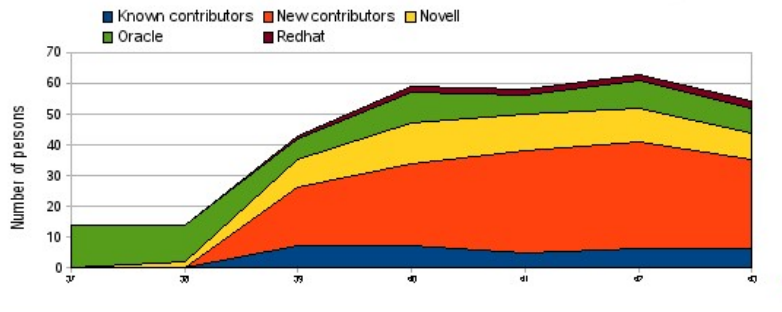
Bundling **existing**, useful extensions – instead of burying them ...

Current Slide (6 of 34)

## How is it going ...

### Extremely well / as of now:

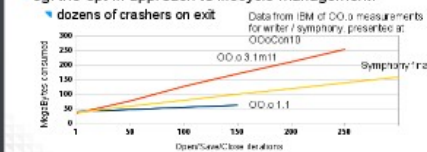
- 50 entirely **new** code contributors with included patches, 27 translators
- another 10+ arriving each week
- 100's of KLOC of real patch [3+million line diff to branch-point] (meaningless?)
- But – Oracle won't join us in name (yet) ... though they contribute indirectly.



Next Slide

## What are we doing ?

- Pay down the vast technical debt we inherited
  - an ancient and gnarled, 20+yr old beast
  - organic growth, without refactoring, a lack of code review etc.
- eg. the opt-in approach to lifecycle management:



11:01:26  
0:00:03





# Features, distinctive to LibreOffice ...

Migration – sadly much of the corporate world is infected with VBA ...

The screenshot displays the OpenOffice.org Calc application window titled "hypocycloid-demo - OpenOffice.org Calc". The interface includes a menu bar (File, Edit, View, Insert, Format, Tools, Data, Window, Help), a toolbar with various icons, and a status bar at the bottom showing "Sheet 2 / 3", "PageStyle\_Chart", "125%", "STD", and "Sum=0".

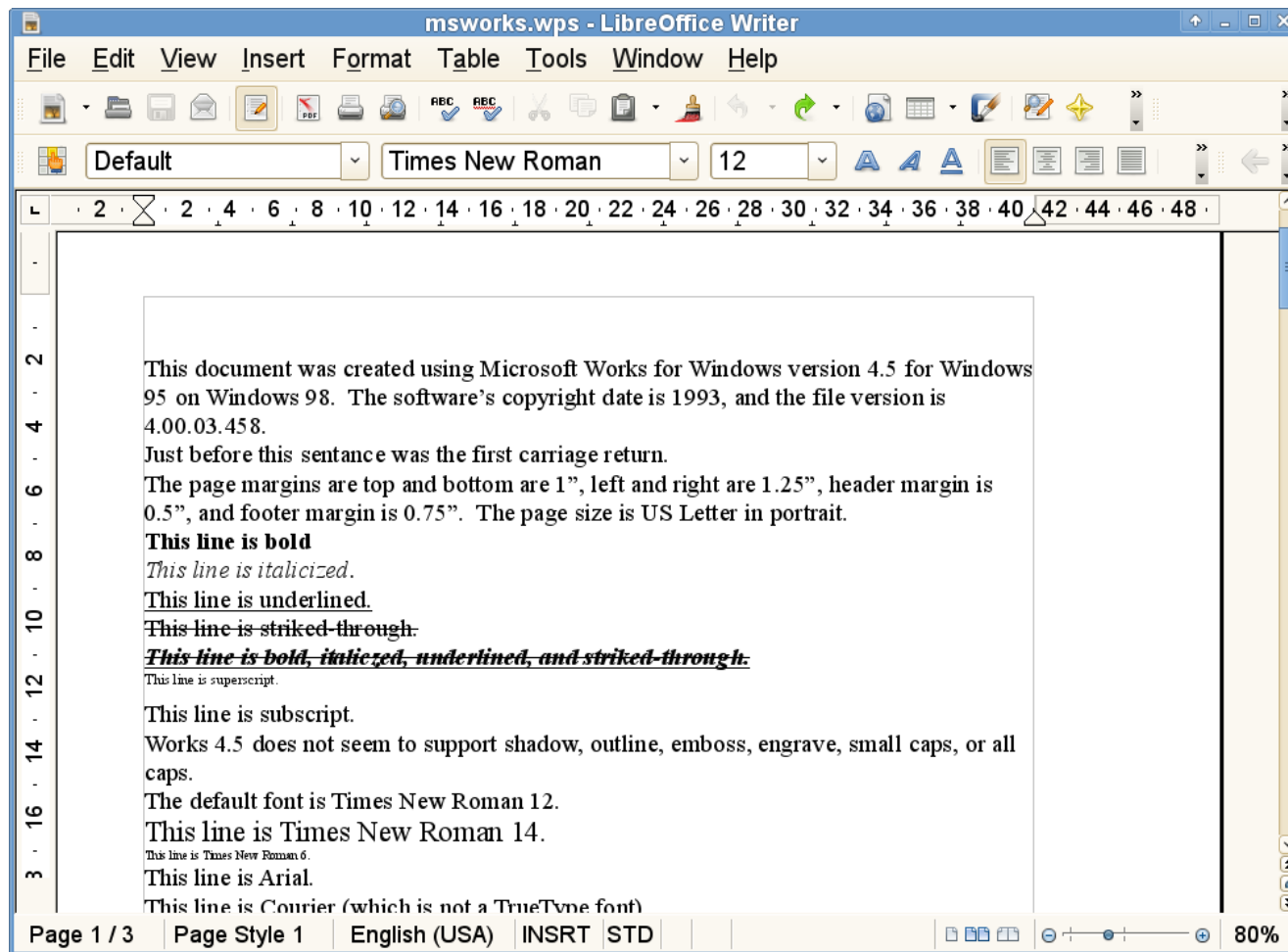
The main workspace is divided into three sections:

- Favorite 1:** A panel on the left with buttons for "Next >", "< Previous", "More Info", "Random", and "Add to Favorites".
- Parameters:** A section with three input fields and a "Random" button. The values are: a: 243, b: 973, t: 963.
- Chart:** A large area displaying a complex, multi-lobed green line graph, which is a hypocycloid.

On the right side of the chart, a vertical column of numerical data is visible, ranging from 242.82 at the top to 650.00 at the bottom. The values are: 242.82, 704.31, 459.64, 562.70, 834.68, 750.31, 546.95, 498.77, 357.19, 829.18, 116.37, 29.14, 456.90, 425.81, 804.95, 217.15, 110.68, 656.53, 847.51, 882.17, 427.04, 518.03, 607.40, 695.72, 986.09, 938.55, 459.64, 185.40, 99.41, 705.55, 50.05, 575.87, 824.58, 771.60, 650.00.

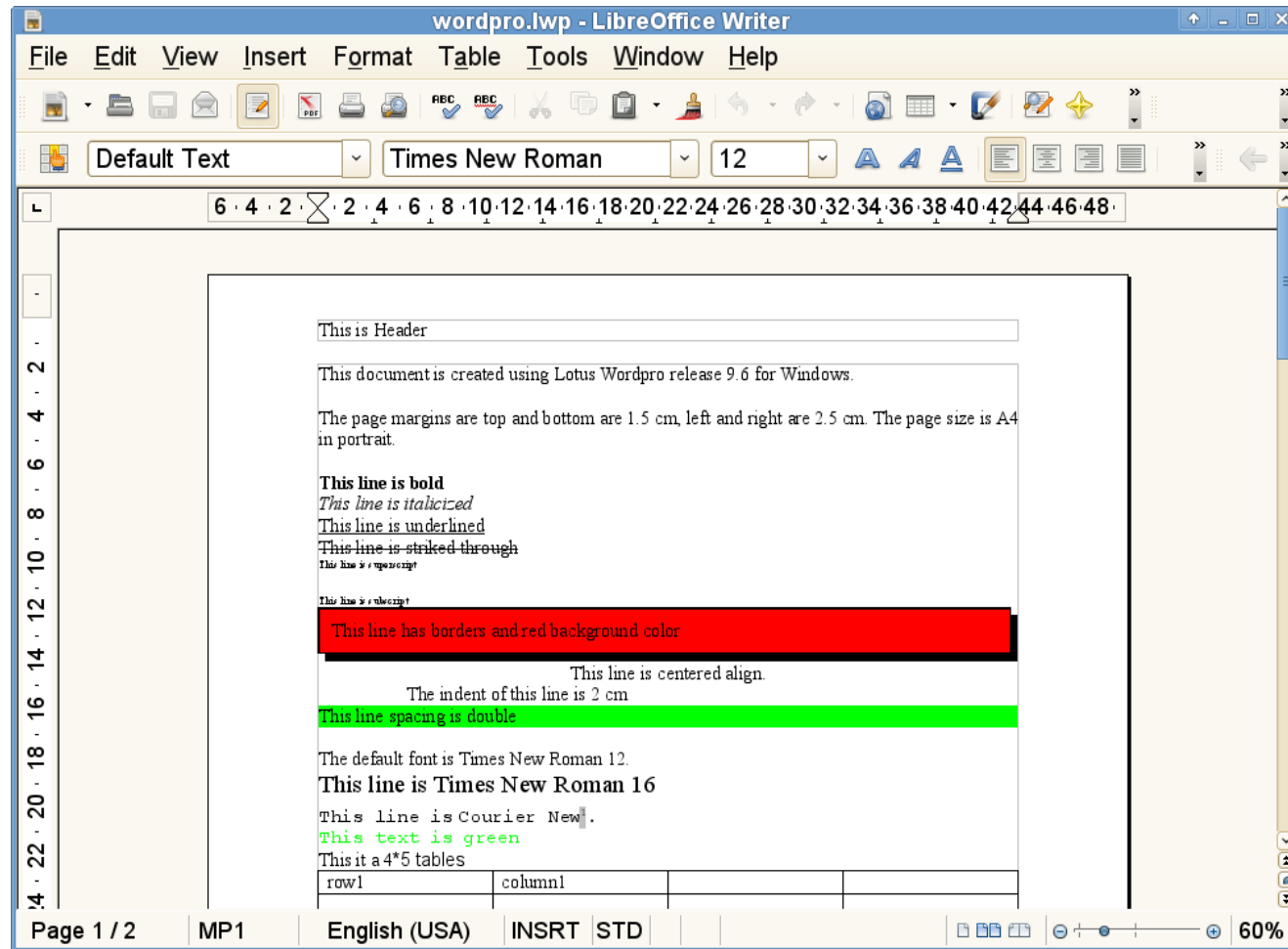
# Copy-left Features, distinctive to LibreOffice ...

Import your legacy Microsoft Works files – and move to ODF ...



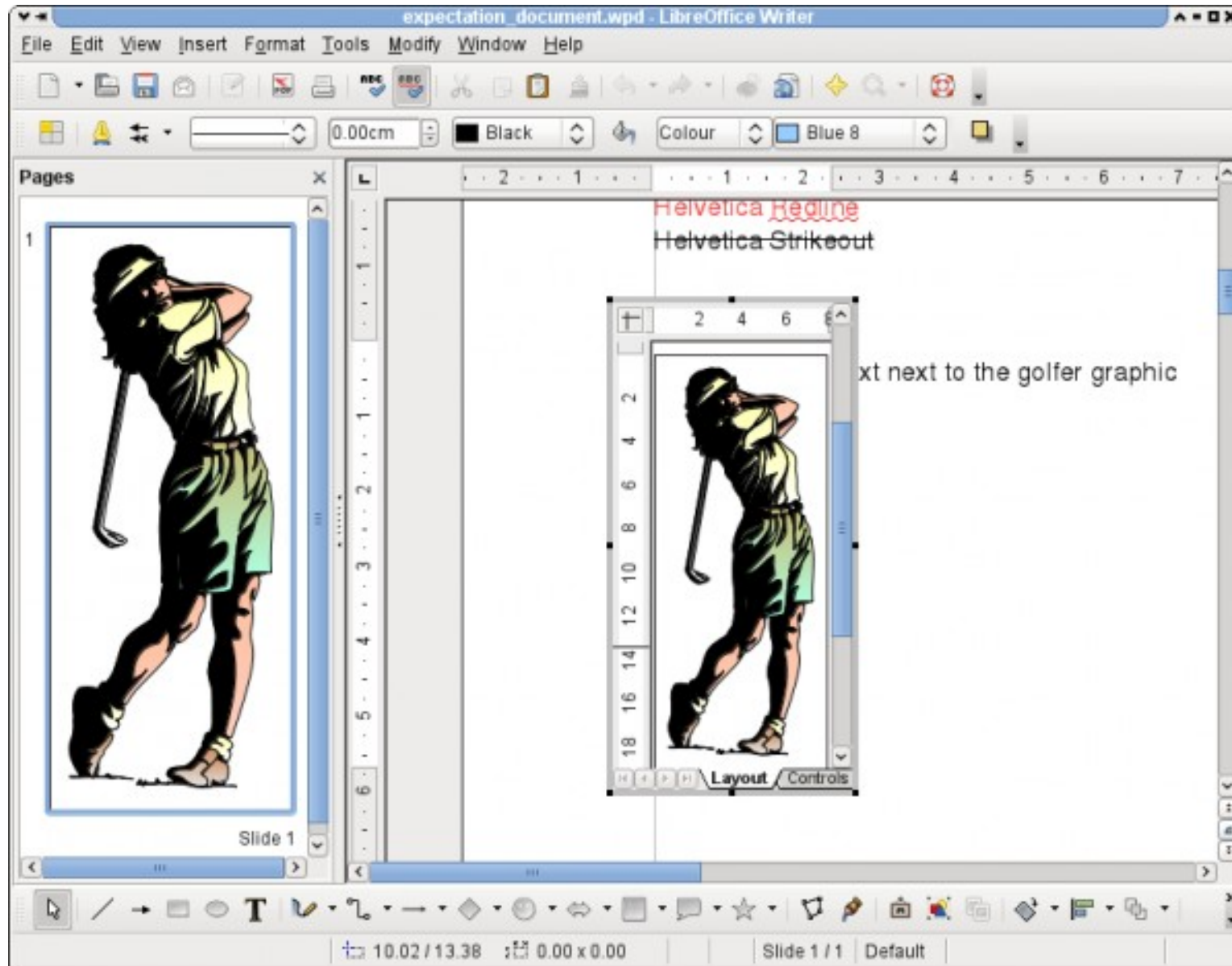
# Features, distinctive to LibreOffice ... (for now)

Import your legacy Lotus Word Pro files – and move to ODF ...

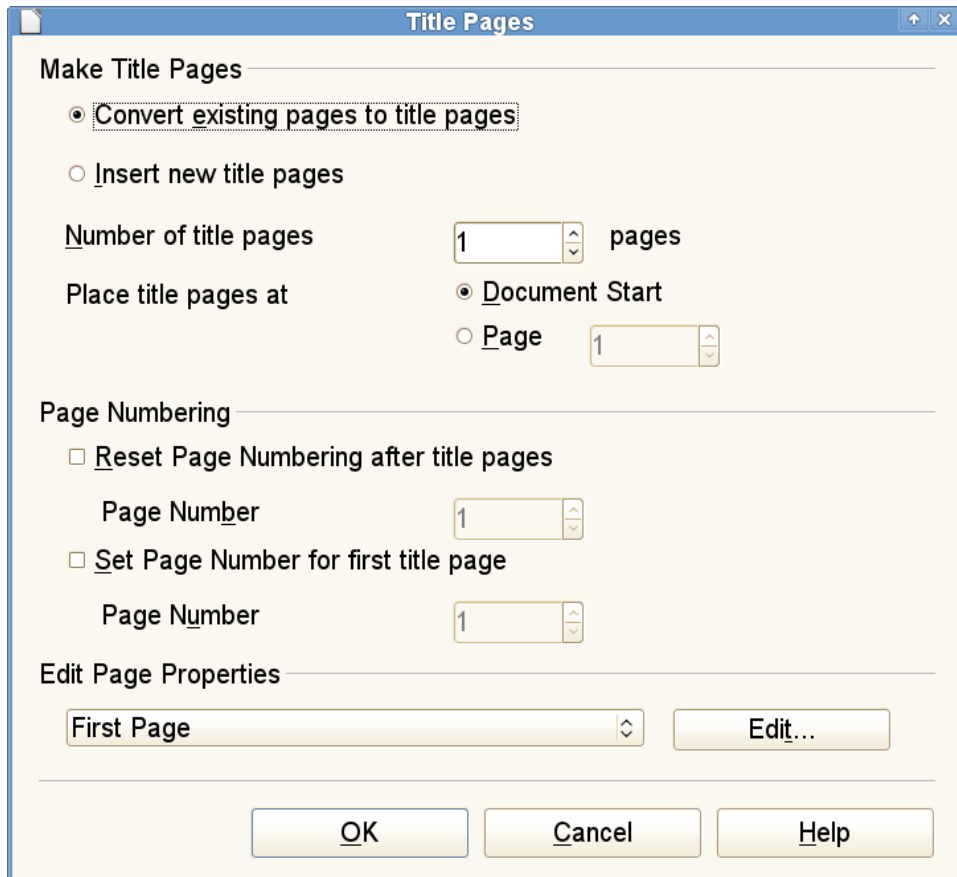


# Copy-left Features, distinctive to LibreOffice ...

Import much more of your legacy Wordperfect files – and move to ODF ...



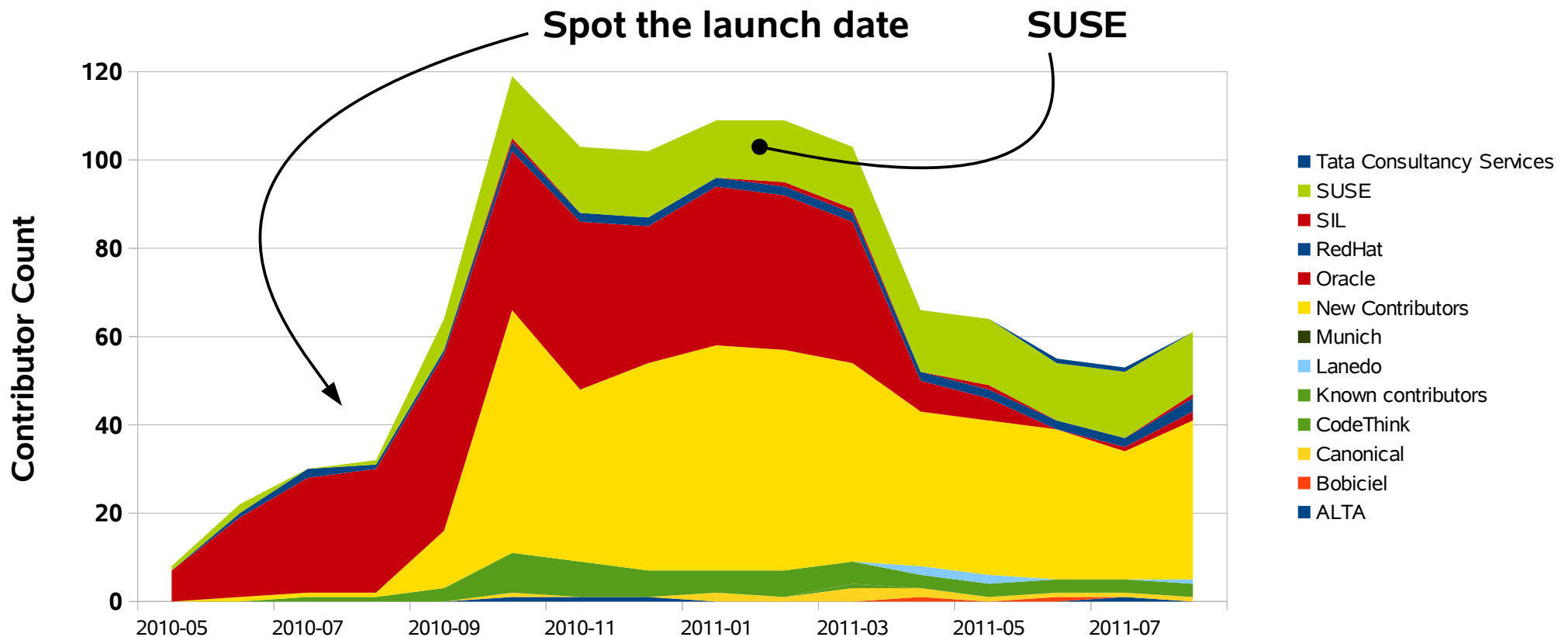
# New Features, distinctive to LibreOffice ... #?



- ▶ Styles are a wonderful, clean way of document markup
- ▶ Getting a title page and correct numbering right, was a top writer UI disaster – but then ...

# ~12 months in: how is it going ? - quite well

- ~220 entirely new code contributors with included patches
- ~260 active translators, for ~100 languages (in Pootle)
- Two stable branches: 3.3.4 and 3.4.3 – 9 stable releases in ~12 months
- Development continues apace: 3.5.0 due early Feb 2012



# What are the others doing ? an update

- ▼ Oracle + IBM: OpenOffice.org → Apache
- ▼ Apache: (*a reasonable home for new projects ...*)
  - ▼ 2011-06-01 "Oracle + IBM announce formation of Apache OO.o"
  - ▼ 2011-07-14 "IBM Donates Lotus Symphony Source Code to the Apache OpenOffice Project" (*but no code to go with announcement, and still none*)
  - ▼ 2011-08-16 Rob Weir checks in a snapshot of OO.o's 3.4 Beta 1 repository
  - ▼ 2011-09-14 – since start:
    - ▼ **~80 code commits from 4 developers:** erack, mbauer, mst, rcweir
- ▼ Today:
  - ▼ mailing list / web-site up / intense discussion ...
  - ▼ 70+ *committers*, some of whom have written code.
  - ▼ re-write copy-left bits, svn not git, abandon freedom lovers, reply-to-mangling, submit to 'mentoring' etc.
  - ▼ **Copy-left licenses 'force' people to contribute ? ... or do they ?**
  - ▼ cf. the *last ~month* @ LibreOffice: **~1380 code commits, ~70 developers**

## New in 3.4 ...



# What's new in 3.4 (latest stable)

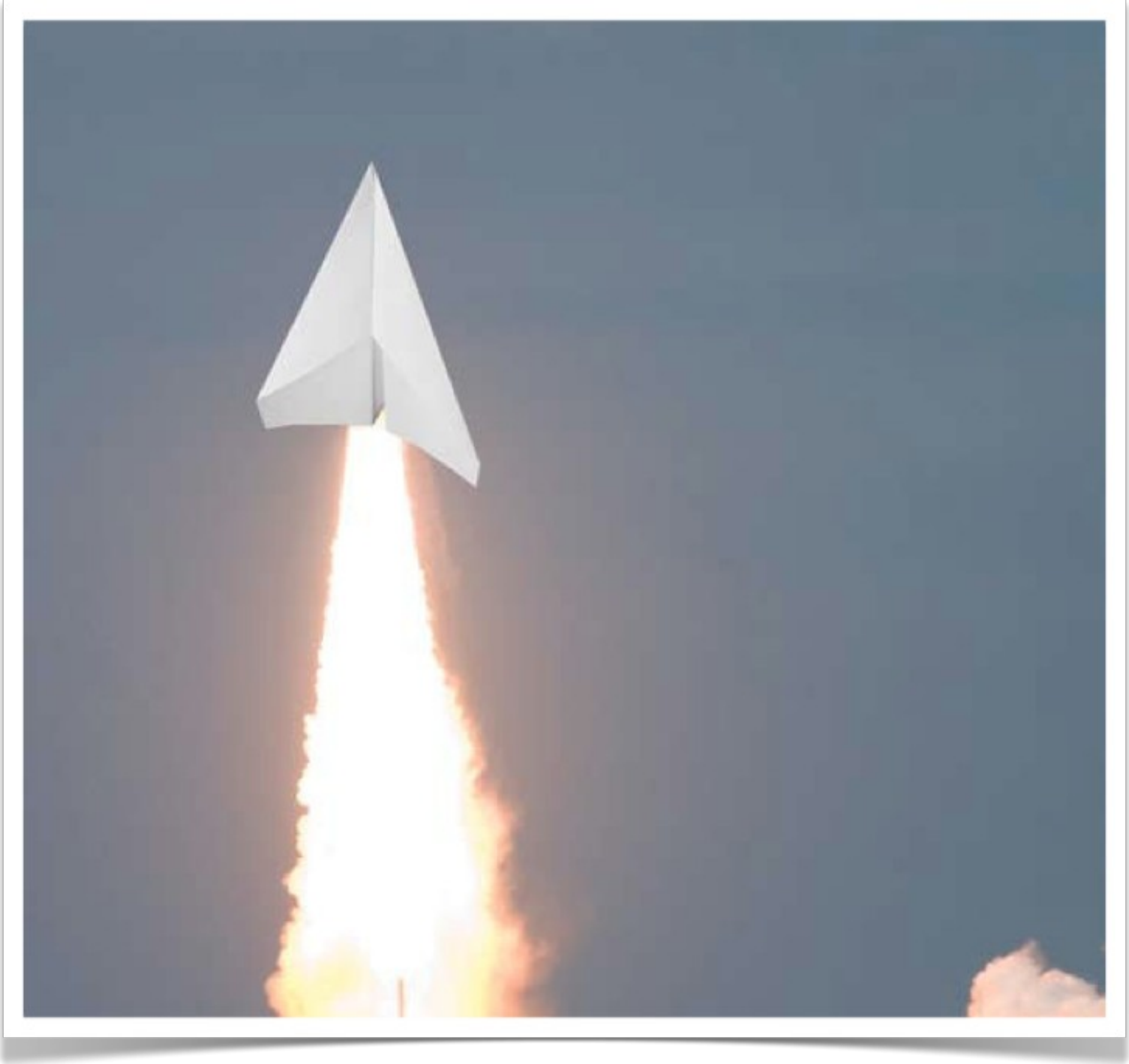
A tiny sampling of a big set of improvements ... that are LibreOffice specific.

- ▼ **.po based translation & pootle**
- ▼ Yet smaller (minus 30Mb) downloads (*Kálmán „KAMI” Szalai*)
- ▼ Prettier – document surround shadows (*Sébastien Le Ray*)
- ▼ Graphite2 smart font rendering (*Keith Stribley*)
- ▼ Many calc improvements (mostly *Kohei Yoshida*)
  - ▼ external reference handling, move/copy/sheet dlg (*Joost Eekhoorn, Christoph Noack*), autofilter per sheet (*Markus Mohrhard*), sheet local named ranges, multiple subtotal ranges, OLE2 links, many DataPilot fixes, precision drawing objects (*Caolán McNamara*)
- ▼ Improved slide / HTML export (*Julien Nabet*)
- ▼ Unity / menu integration (*CodeThink for Canonical: Alberto Ruiz*)
- ▼ High-speed (C++) flat-ODF support (*Peter Jentsch*)
- ▼ Improved native theme integration (*Lucas Baudin*)
- ▼ Bug fixing and dead code removal and much more (*Takeshi Abe*)
- ▼ Lari (ldi), Mbochi (mdw), Teke-Ibali (tek), Teke-Tyee (tyx), and Vili (vif) languages (Republic of Congo)

# What's new in 3.4 (latest stable) #2 ...

A tiny sampling of a big set of improvements ... that are LibreOffice specific.

- ▶ Remove export from binfilter (*Pierre-André Jacquod*)
- ▶ Nicer mozilla-like ctrl-f 'Find' dialog (*Jan Holesovsky*)
- ▶ Color Chart editing (*Rob Snelders*)
- ▶ Rotate through case changes (*Bálint Dózsa*)
- ▶ Smoother splash/startup/2nd start on Linux (*Michael Meeks*)
- ▶ Cleanup inefficient accessible theming (*Chris 'mordocai' Carpenter, Sebastian Spaeth*)
- ▶ Remove 150 duplicated redundant 'missing icon' icons to reduce bloat (*Joachim Trémouroux, Andrew C. E. Dent*)
- ▶ Remove 624 localized palette files: localize at run-time (*Andras Timar*)
- ▶ Bin compatibility layer for old Windows 9x non-unicode APIs (*Jesús Corrius*)
- ▶ Cleanup to use STL and boost containers. (*Joseph Powers, Rafael Dominguez*)
- ▶ Thousand of incorrectly 'executable' files fixed (*Francisco Saito*)
- ▶ Thousands of lines of dead code removed [Writer/Calc/Impress] (*Kayo Hamid*)
- ▶ **Apologies to many more that I omitted for reasons of space etc.**



BUT ! - LibreOffice needs your help ...

**We can't do this alone ... there is lots to do**

## What are we doing ? #2

- ▶ Making it easy to contribute: we welcome change ...
  - ▶ Google search: *libreoffice easy hacks*
  - ▶ Post a patch to our (open) mailing list and discuss it
- ▶ Creating unit tests (run during build)
- ▶ Removing deprecated cruft:
  - ▶ VOS library (deprecated for a decade), OS/2 support, use c++ templates not macros, cppcheck bug fixing etc.
  - ▶ wasting fewer resources: icons duplication etc.
- ▶ ~done merging outstanding vendor patch-sets
- ▶ Smaller, faster release process:
  - ▶ A single 180Mb download (for Windows) with all langs
  - ▶ plus on-line help, (in place of a copy per lang)

# An example in practise ...

## ▸ John Lee Castle

- arrives on list to help debug a (star)basic crash
- 2 days later – first set of 'warning' patches merged
- Sadly beaten to the word-count feature, but ...
- digs in bugzilla to find & 1 week later fixes Issue 76852:

Opened: Wed May 2 12:28:00 +0000 2007

Run this Basic macro:

```
Dim s as single
```

```
s = 999999
```

```
print s ' display : 999999
```

```
s = s+1
```

```
print s ' display : 1 ***** incorrect ***
```

```
s = s+1
```

```
print s ' display : 1.000001E6
```

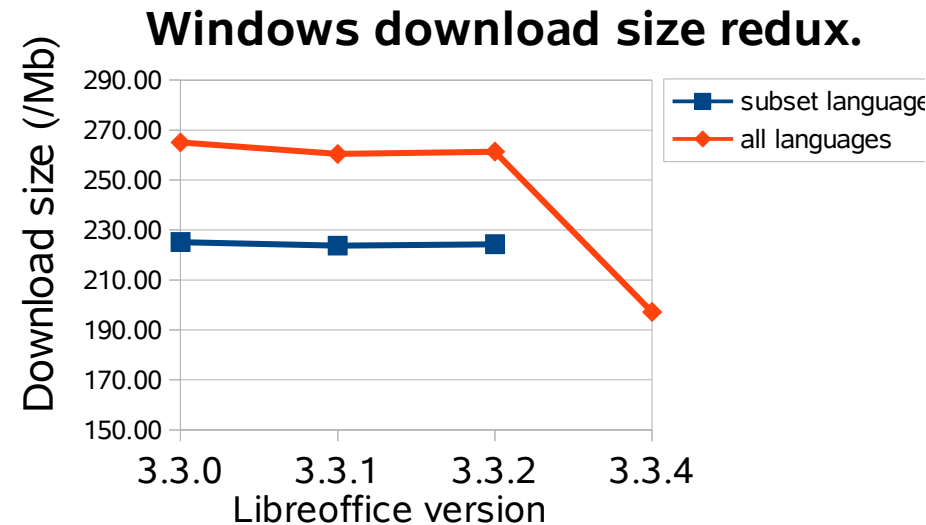
**A one line fix !**

# Are you: A user ? how to be a contributing user:

- ▶ File helpful bugs
  - ▶ Clear description vs. *it doesn't work*
    - ▶ We have to *find* the feature ourselves
  - ▶ *Minimal* sample documents: should exist
    - ▶ *ie. what is the smallest possible bug document*
- ▶ Bug triage – hunting duplicates, testing 'bad' bugs
  - ▶ Help us out – we have some wonderful QA guys – Monthly Bug Days
- ▶ Walking on the wild-side ...
  - ▶ testing daily builds of master ...
  - ▶ testing stable release candidates – 1 week ahead ...

# Can you: mirror / translate ...

- ▼ Mirrors: always room for more...
  - ▼ [mirrors@documentfoundation.org](mailto:mirrors@documentfoundation.org)
  - ▼ We are small: ~**5Gb** per release vs. **76Gb**
    - ▼ and getting smaller
    - ▼ *free up 70Gb on your server ?*
  - ▼ We use (the excellent) mirrorbrain
- ▼ Translators: [l10n@libreoffice.org](mailto:l10n@libreoffice.org)
  - ▼ we have a no-language-favoritism policy
    - ▼ we bundle all active and completeish translations
    - ▼ quick release: see the result of your labour in your own lifetime





# Something special for German speakers ...

- ▼ **For Germans ...** *(even with no prior programming experience)*
  - ▼ We have major source code translation problems
  - ▼ Fantastic “German comment detector” from Miklos
    - ▼ Re-uses existing LO code for language detection :-)
- ▼ **Are you German ? can you read this ? ⇒ we need your skills !**

```
// CebIT Hack – muss noch optimiert werden!  
// Wenn Sie das lesen koennen, dann haben Sie eine Waschmaschine  
gewonnen!  
// Alles hat ein ende, nur die wurst hat zwei – cf. impl_getMehrWurst  
// Manta-Hack: ....
```

# Can you: hack ? [libreoffice@lists.freedesktop.org](mailto:libreoffice@lists.freedesktop.org)

- ▶ Ultra elite programming skill not necessary
  - ▶ Plenty of entry level problems; cf. [Easy Hacks](#) page
- ▶ A language you can help with is there:
  - ▶ *C, C++, Java, Python, Perl, Basic, shell, XSLT, Web ...*
- ▶ Tons of new simple tasks, and heavy lifting too
- ▶ Lots of easy hacks: (a tiny sample):
  - ▶ porting from Java → python  
and Java → C++
  - ▶ kill 3 of 4 duplicate base64 impls.
  - ▶ remove dead / un-called code
  - ▶ fix cppcheck warnings
  - ▶ remove obsolete macros
  - ▶ run cut+paste code detector
  - ▶ remove thousands of multi-second sleeps from QA tooling
  - ▶ help thread the spreadsheet recalculation engine
  - ▶ write unit tests
  - ▶ stop battery sapping timer leaks
  - ▶ improve localisation tooling



The next release: 3.5 ...

# A roadmap to the future ...

- ▶ A **time based, six-monthly** release train ...
  - ▶ **synchronized** with the Linux distributions cadence
  - ▶ ie. a normal Free Software project
  - ▶ rapid fire, (monthly) bug-fix release on stable branch

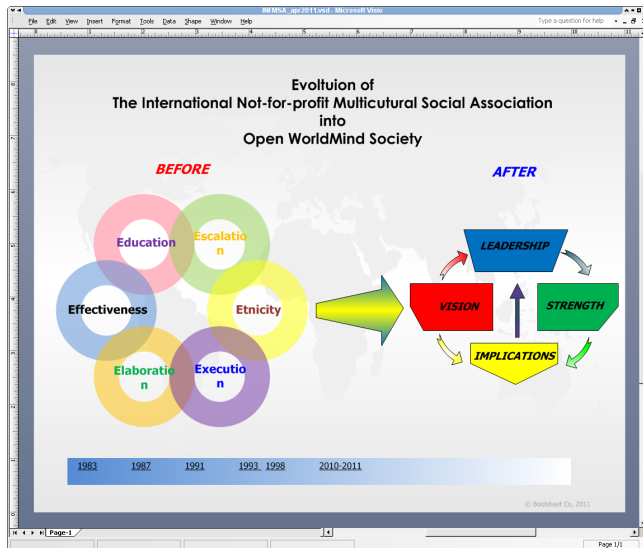
## LibreOffice Releases

By using a time-based release schedule and maintaining two parallel branches, LibreOffice will always be available both for early adopters and conservative users, with the most appropriate version for each group's specific needs and habits.

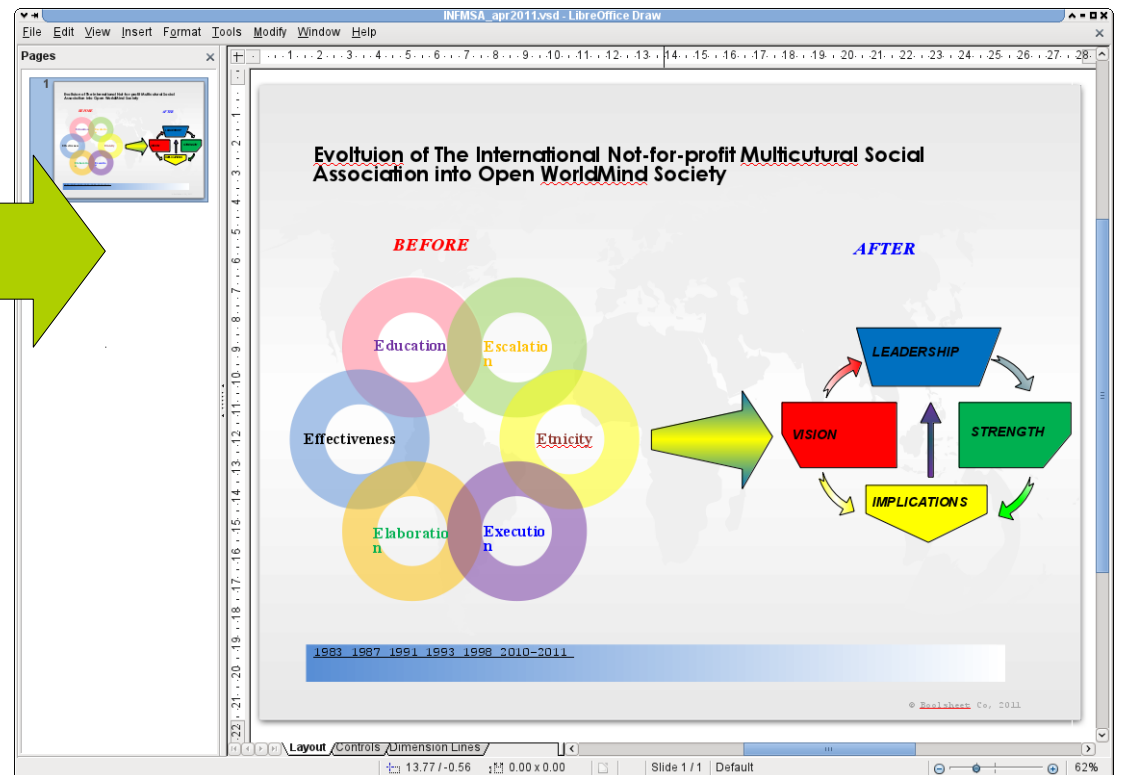
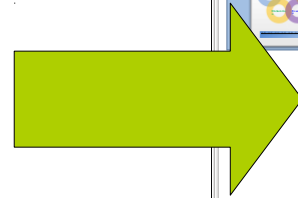
<b>3.3 Family</b>	<b>3.3.2</b>		<b>3.3.3</b>			<b>3.3.4</b>				
<b>3.4 Family</b>		<b>3.4.0</b>		<b>3.4.1</b>	<b>3.4.2</b>		<b>3.4.3</b>		<b>3.4.4</b>	
<b>3.5 Family</b>								<b>3.5.0</b>		<b>3.5.1</b> <b>3.5.2</b>
<b>Developers</b>	daily snapshots of master / self-built versions									
<b>Bleeding Edge</b>	<b>3.3.2</b>	<b>3.4.0</b>		<b>3.4.1</b>		<b>3.4.2</b>		<b>3.4.3</b>	<b>3.5.0</b>	<b>3.5.1</b>
<b>Stable</b>			<b>3.3.3</b>		<b>3.4.2</b>			<b>3.4.4</b>		<b>3.5.2</b>
<b>Very Stable</b>	<b>3.3.2</b>		<b>3.3.3</b>				<b>3.4.3</b>	<b>3.4.4</b>		
<b>Rock Solid</b>			<b>3.3.3</b>		<b>3.3.3</b>	<b>3.3.4</b>			<b>3.4.4</b>	<b>3.4.4</b>

# Visio Import filter ... (GSOC: Tibby Lickle + Strba)

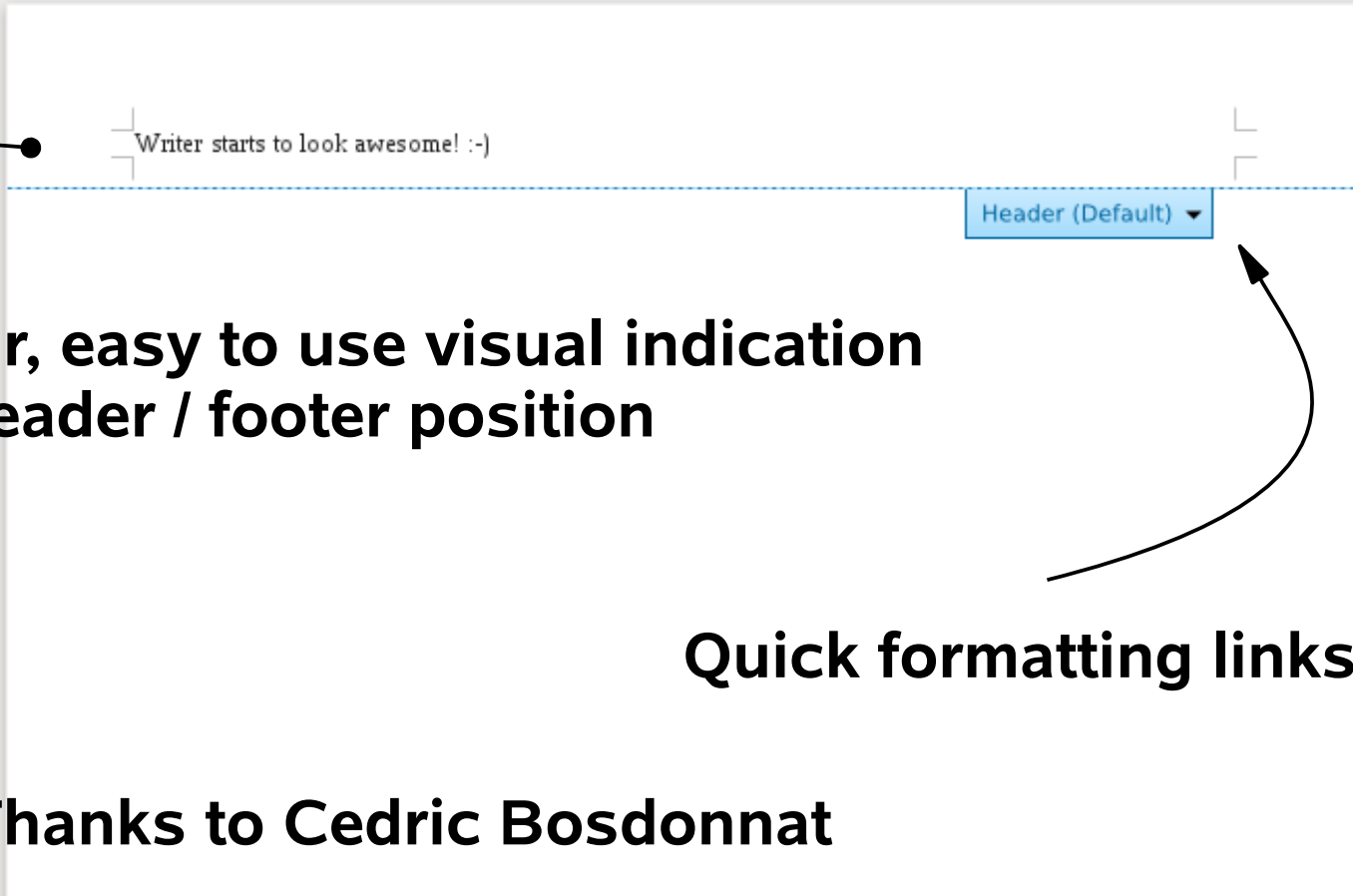
## MS Visio



## LibreOffice draw / impress etc.



A side-effect: converts Visio files to ODF ...



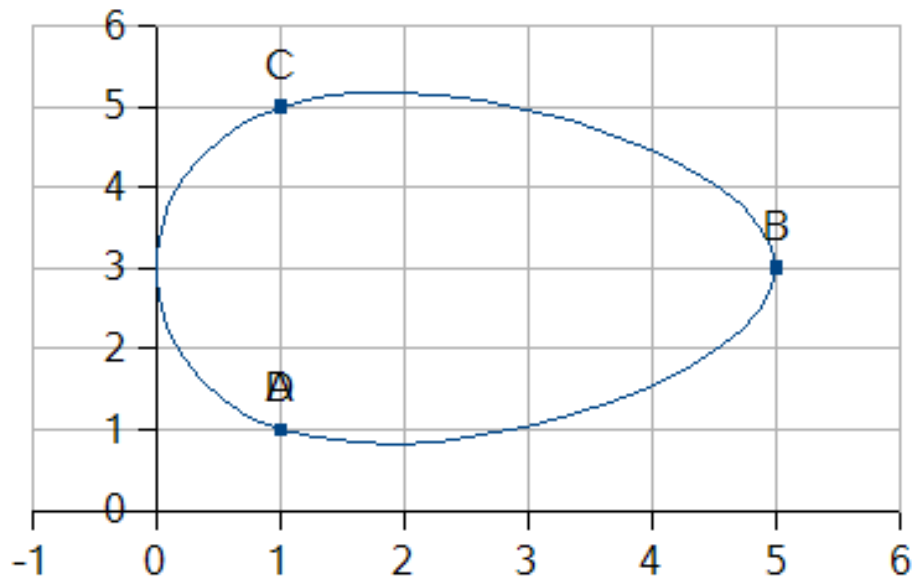
**Clear, easy to use visual indication of header / footer position**

**Quick formatting links**

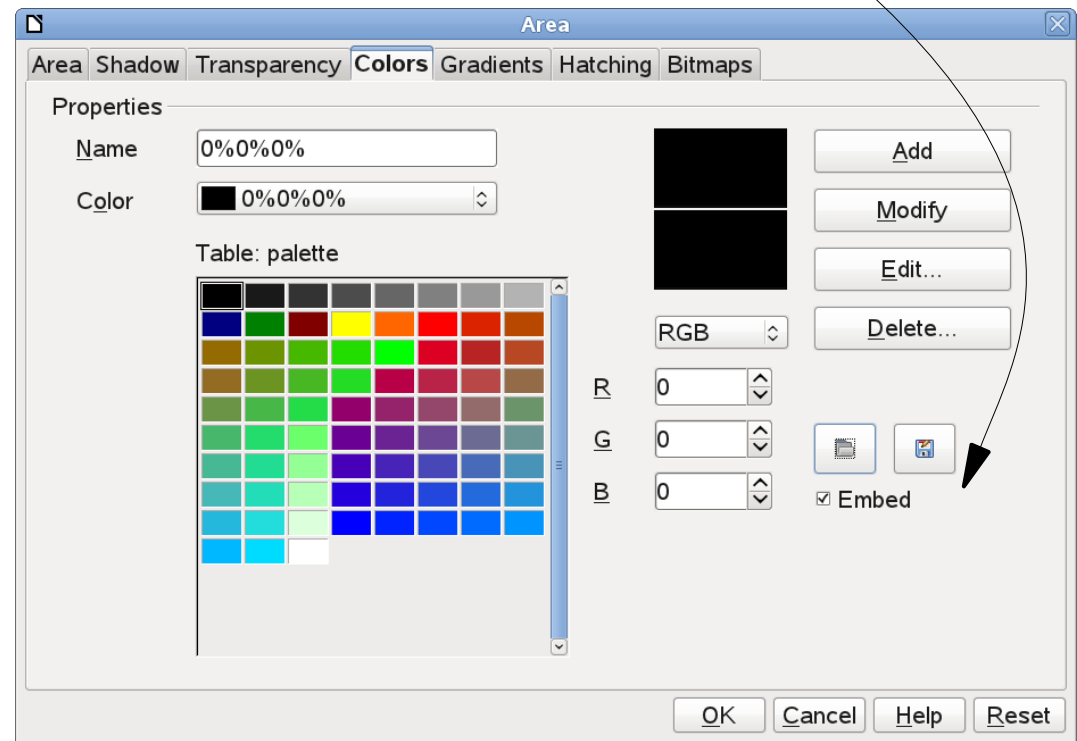
**Thanks to Cedric Bosdonnat**

# Charting + Impressing ...

Beautiful, continuous  
line chart smoothing  
(Regina Henschel)



## Embedding palettes etc. in ODP



*Thanks to Karlin Stokes' input*

# And **much** more ... (just a taste) ...

## ▸ Misc.

- New Persian + Arabic numbering types + fixes.
- RTF import re-write & improvement (*Miklos Vajna*)
- Wizards: Java → Python (*GSOC: Xisco Fauli + Bjoern*)
- iPhone / Android cross-compilation infrastructure (*Tor*)

## ▸ Quality Improvements

- Daily windows tinderbox + testing / one-git migration helps
- During-build unit testing
- Security – fuzzing ++ dozens of fixes - (*Marc-Andre Laverdiere*)
- Debugging – beautiful python annotation / string printing etc.

## ▸ Performance

- Link time optimization & merged buidling
- Tons of spreadsheet performance improvement



## WebOffice suites ...

# Give up now !?!?? – the web will swallow us all ...

- The proliferation of web developers is amazing:
  - full function off-line == re-write all in Javascript
    - Best of luck with this project: 8 million lines later
  - eg. Conference WiFi & 3G is extremely cluttered
    - I would like to show you these slides today
      - but they are on a server I can't get to, *no DNS, no signal, no ...*
    - Rent vs. Buy - cloudness ? – *Buy Furcate, Rent Collectors ?*
  - MS Office 365 – down for a day in US in <6 months
- My Phone is an 80's super-computer anyway ...
  - *seen my vt220 app ?*
- WYSIWYG, page layout ~impossible in a CSS world
  - HTML5 / the Canvas may change this ... VNC/web etc.

# Cloud Office / HTML5 prototype ...

- Uses gtk+ 3's / broadway backend to render (via some javascript shims) in the browser:
  - All intelligence and rendering on the 'server' app.
- Still a prototype, rendering performance improving
- This approach allows a full-feature experience
  - ie. complex text-layout, large, complex spreadsheets, WYSIWYG (eg. edit your footnotes on the page), VBA macros, Pivot Tables etc.
- Also a number of challenges:
  - Lots of missing pieces in Web APIs that need work ...
    - Printing, scanning, file management, etc. etc.

# Example:

Custom contoured picture, with text fill

File Edit View History Bookmarks Tools Help

broadway 2.0


http://localhost:8080/

File Edit View Insert Format Table Tools Window Help

## Gnome/OpenOffice 1.1

A small table with an embedded imager

This is a picture of our wedding with some nice text flow going on around it, of course you can edit a custom contour as well as having a crude ellipse, which makes for a very nice look. Below it is an alpha blended free-hand, filled spline with drop shadow and gradient.



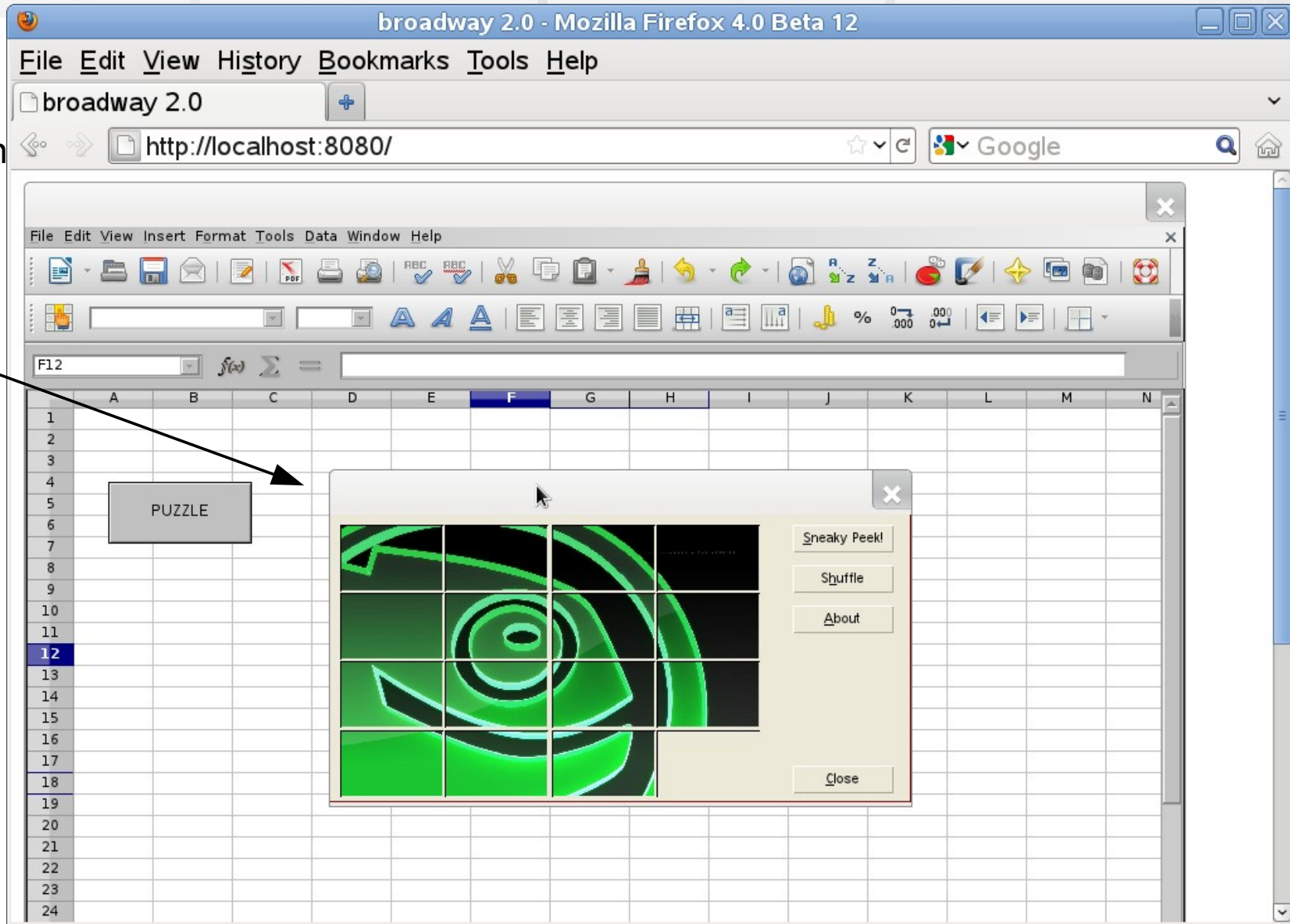
And chart of the week:

### Persistant Sins

- Jealousy
- Pride
- Lust
- Idleness

# Example:

VBA macro driven spreadsheet button workflow that lets you play a puzzle with your favorite SUSE gecko ...



# What we're working on now:

- Waiting to mentor you (**yes you ;-)**)
- **Bug fixing & Polish**
  - gnu-make completion & cross-compile for Windows
  - new features: SmartArt, improved interop, layout
  - bottom up ... clean code → clean UI → features
- Governance:
  - Incorporation – raised Eur100k for foundation
  - <http://wiki.documentfoundation.org/CommunityBylaws>
  - 130+ Memberships bootstrapped, ESC / MC setup, etc.
  - **Conference a Paris: 12<sup>th</sup> – 15<sup>th</sup> October ...**
  - **SUSE funding via Advisory Board seat + Hackers ...**
  - **Elections to Board coming soon ...**

## Conclusions ...

# LibreOffice conclusions ...

- ▶ We Aspire to a big, diverse, fun, vigorous, vendor neutral, Linux (kernel) like community ...
- ▶ Web Office – very early fun for the family ...
- ▶ Strike a **dis-proportionate** blow for freedom
  - ▶ LibreOffice will have a **hundred million users**
  - ▶ get people **excited** about Free Software they use ...
  - ▶ Try an '**Easy Hack**' - get stuck to the tar-baby ...
- ▶ Thanks for all of your help and support !
- ▶ **we rely on you**, to prove the power and wisdom of Free Software with us.

*Oh, that my words were recorded, that they were written on a scroll, that they were inscribed with an iron tool on lead, or engraved in rock for ever! I know that my Redeemer lives, and that in the end he will stand upon the earth. And though this body has been destroyed yet in my flesh I will see God, I myself will see him, with my own eyes - I and not another. How my heart yearns within me. - Job 19: 23-27*